

NAVAL MEDICAL RESEARCH AND DEVELOPMENT NEWS

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Formal Commissioning Held for NAMRU-6, Newest Command of the Naval Medical Research Center Enterprise

Provided by NAMRU-6 Public Affairs

U.S. Naval Medical Research Unit No. 6 ([NAMRU-6](#)) became the newest command of the Naval Medical Research Center enterprise following its commissioning ceremony in Lima, Peru, February 10. The mission of NAMRU-6 is to detect infectious disease threats of military and public health importance, to develop and test strategies and products aimed at mitigating the threats, and to evaluate those strategies.

The commissioning ceremony was officiated by Rear Adm. Eleanor Valentin, commander, Navy Medicine Support Command, Jacksonville, Fla., who transferred total responsibility, authority, and accountability via Capt. Richard L. Haberberger, Jr., commanding officer, Naval Medical Research Center, Silver Spring, Md., to Capt. John W. Sanders. Upon formal reading of his official orders, Sanders became the first commanding officer of NAMRU-6, marking the achievements of the past 27 years and ushering in a

renewed vision of greater research and collaboration.

The guest speaker was Ambassador Rose M. Likins, U.S. Ambassador to Peru. Under her direction, the status of NAMRU-6 as a part of the U.S. diplomatic mission in Peru will not change.

The ceremony marked a pivotal day for U.S. Navy medical research in the U.S. Southern Command area of responsibility and for U.S. partnerships in Latin America. By means of strategic partnerships with prestigious academic organizations, NAMRU-6's contributions reinforce local capabilities to conduct disease surveillance; improve training in outbreak response, epidemiology, and laboratory techniques; and overall, share knowledge with collaborators throughout all of the U.S. Southern

Command area of responsibility.

In January, NAMRU-6 received a visit from the Honorable Raymond Mabus, Jr., 75th Secretary of the U.S. Navy, and Vice Admiral Pizarro, Inspector General of the Peruvian Navy, who christened NAMRU-6 in a small and memorable ceremony (see story in the [February 2011](#) issue of the newsletter).

Originally established as the Naval Medical Research Institute Detachment (NAMRID) in Lima, Peru, January 20, 1983, through the efforts of the Surgeons General of the Peruvian Navy and U.S. Navy and with the U.S. Department of State and Peruvian Ministry of Foreign Affairs, the lab became part of a joint effort to study infectious diseases of mutual interests.

Overseas infectious disease research has historically been a part of Navy Medicine, beginning with the research divisions established by the Bureau of Medicine and Surgery during World War II to study epidemiological problems and tropical diseases.



From left: Rear Adm. Eleanor Valentin, commander, Naval Medicine Support Command; Capt. Richard L. Haberberger, Jr., commanding officer, Naval Medical Research Center; and Capt. John W. Sanders, commanding officer, NAMRU-6, during the commissioning ceremony. Photo provided by NAMRU-6 public affairs.

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Commanding Officer's Message

February was Black History Month, an annual recognition of the historic challenges, contributions and successes – great and small – by African Americans. Late in February, personnel from the Naval Medical Research Center and Walter Reed Army Institute of Research at the Forest Glenn Annex in Silver Spring, Md., came together in the Gorgas Memorial Library to hear presentations and view exhibits recognizing prominent African Americans in science and research. The afternoon event began with a presentation on one of the greatest scientific contributions to biomedical research by Henrietta Lacks, a poor African American tobacco farmer and mother of five who was a very sick woman in 1951, seeking medical care for cancer at Johns Hopkins.



Henrietta Lacks became one of the most important women in medical history, whose cells revolutionized biomedical research. Samples of her cancer cells were provided to Dr. George Otto Gey, who propagated the cells shortly before Henrietta Lacks' death. Her unique cells became the first human cell line, named HeLa cells.

Termed immortal because they can divide an unlimited number of times in a laboratory cell culture plate, HeLa cells have been used by research scientists around the globe. There are many strains of HeLa cells as they continue to evolve by being grown in cell cultures, but all HeLa cells are descended from the same tumor cells removed from Henrietta Lacks. Neither Henrietta Lacks nor her heirs profited from her contribution.

Doctors still have not discovered the reason for HeLa cells' unique vigor. Her legacy lives on and saves lives.

We continue to watch closely the events unfolding in the Middle East and Northeastern Africa and we are monitoring the potential impact these actions will have on our current research efforts in those areas. February 2011 marked NAMRU-3's 65th anniversary. Instead of celebrating the anniversary, the NAMRU-3 Commanding Officer is working to keep the research efforts moving forward with limited staff. She is also working with the U.S. State Department for clearance for some of her American staff to return, as well as providing support and information to the staff and their families who are now in the U.S. Several NAMRU-3 researchers are now at the Naval Medical Research Center in Maryland, settling in and tracking their individual projects. Fortunately, the essential NAMRU-3 U.S. staff who remained in Cairo and the local Egyptian staff have been able to return to work.

NAMRU-3 is the largest Navy overseas medical research facility and one of the largest medical research laboratories in the North Africa-Middle East region. Since 1946 NAMRU-3 has been an internationally recognized infectious disease laboratory focused on force health protection and global health security. The laboratory's mission is to study, detect and monitor emerging and re-emerging disease threats of military and public health importance and to develop mitigating strategies against these threats in partnership with host nations and international and U.S. agencies in the CENTCOM, EUCOM, and AFRICOM areas of responsibility. Besides current efforts in Egypt, the laboratory has active projects in 15 additional countries in Africa, the Middle East, Central Asia and Eastern Europe. The focus of the research, outbreak response, and disease surveillance efforts in Egypt and elsewhere in NAMRU-3's AOR includes avian and seasonal flu, malaria, leishmaniasis, HIV and AIDS, gastrointestinal pathogens and hemorrhagic fever viruses.

Commanding Officer sends,
Richard L. Haberberger, Jr.
CAPT, MSC, USN

NAMRU-2 Assists with Hawaiian *Anopheles* Larval Survey

Provided by NAMRU-2 Public Affairs

A military and civilian team, including a member from the U.S. Naval Medical Research Unit No. 2 Pacific (NAMRU-2 Pacific), assisted with mosquito trapping efforts to check for possible new *Anopheles* species in and around U.S. Army Garrison Hawaii.

In October 2010, suspected *Anopheles* mosquitoes were found in traps near the garrison. Potential invasion of Oahu by a mosquito species capable of transmitting human malaria could pose an increased risk of pathogen transmission. In early February 2011, a larval survey was conducted to identify and locate any possible habitats to target for eradication efforts. Joining with their Navy Environmental and Preventive Medicine Unit No. 6 (NEPMU-6) colleagues and their Army, Air Force and civilian public health counterparts, NAMRU-2 Pacific was part of a mobile invasive species response effort collecting mosquito larvae in the wooded areas and ravine around Tripler Army Medical Center.

"Invasive mosquitoes and other emerging disease vectors are a permanent concern for Hawaii and the



*Lt. Ian W. Sutherland, department head, Navy Environmental and Preventive Medicine Unit No. 6, part of the Hawaiian *Anopheles* larval survey team.*



HM1 Patrick Quito, NAMRU-2 Pacific senior enlisted leader and member of the surveillance team.

Pacific AOR in general," said Lt. Ian W. Sutherland, department head, NEPMU-6. "I'm glad to be part of the team working to monitor and prevent additional health threats from establishing a permanent foothold on Oahu. Following detection of a possibly introduced species, adult mosquito surveillance in the area has been ramped up and we conducted a survey to zero in on any potential larval habitat and breeding populations. As a Navy entomologist, this type of work is exactly what we're trained to do. Then again, half the fun is just getting out there and getting dirty."

Officials from the Hawaiian Department of Health, noting that no new species were collected in this effort, praised the Army's routine monitoring that was able to identify a new species so that partner agencies could expand the trapping efforts to surrounding areas. Weather may have been a factor in no new specimens being found; local public health surveillance efforts will continue.

"Our environment is changing

constantly and we're starting to see emerging and re-emerging diseases not particularly endemic to a region. It is our mission to take preemptive measures and discover potential contributing factors that may lead to the emergence of mosquito-borne diseases in Hawaii," said HM1 Patrick Quito, NAMRU-2 Pacific senior enlisted leader and member of the surveillance team. HM1 Quito went on to add, "Collaborative efforts between the military services help us meet our mission and provide a welcome opportunity to engage with the community."

In June 2010, NAMRU-2 headquarters was relocated from Jakarta, Indonesia to Pearl Harbor, Hawaii. NAMRU-2 maintains a distributed laboratory network in Southeast Asia, including Cambodia, Laos and Singapore. NAMRU-2's mission of infectious disease surveillance, response and capacity building is important to the U.S. Pacific Command and the U.S. Pacific Fleet strategic interest in the Pacific Area of Responsibility.

Staff of NAMRU-3 in Cairo Salutes New NAMRU-6, Lima, Peru

Members of the U.S. Naval Medical Research Unit No. 3 ([NAMRU-3](#)), Cairo, Egypt, rendered a “High Six” salute to the men and women of the U.S. Naval Medical Research Unit No. 6 ([NAMRU-6](#)), the Naval Medical Research Center’s newest command.

Capt. Robin Wilkening, commanding officer, NAMRU-3, said, “The establishment of NAMRU-6 as a command is a recognition of the Lima, Peru laboratory’s continuous and superb accomplishments in infectious diseases research and public health service in the

region. NAMRU-6 personnel are renowned for their scholarly contributions to worldwide scientific literature. Their establishment as a command will serve to provide an even greater platform for future innovation and success.”

NAMRU-6 shares commonalities with NAMRU-3 in that they both attribute much of their success to close, productive partnerships with host country governments and well-established collaborations with regional public health agencies and academic institutions.

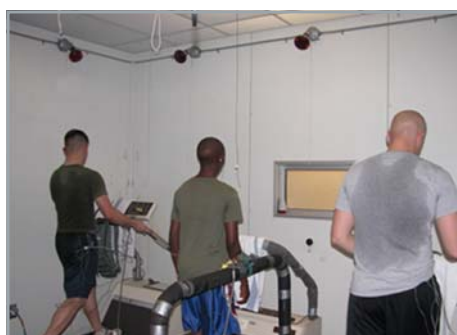


Heat Tolerance Test Determines Return to Duty and Training Status

By Shawn Richeson, NHRC PAO

The Naval Health Research Center ([NHRC](#)), the lead in thermal research within Navy Medicine, developed a Heat Tolerance Test (HTT) to assist Navy clinicians with a decision to return to full duty a sailor or Marine who has experienced a severe heat injury. NHRC researchers adapted the Israeli HTT to provide a more stringent physiological challenge for active-duty military personnel.

“The Heat Tolerance Test has become a highly effective evaluation tool providing Navy clinicians with objective physiological performance data. Our sailors and Marines are often at increased risk for heat injuries during sustained operations in high heat and humid environments,”



Participants completing the 2-hour HTT treadmill walk at 104°F and 40 percent relative humidity. Photo courtesy of NHRC Public Affairs.

said Jay Heaney, environmental physiologist, NHRC Warfighter Performance Department. “The combination of up-tempo operations with the need to wear protective clothing and body armor exacerbate this risk.

Once a warfighter experiences a serious heat injury, activity is typically restricted pending a medical clearance to resume normal duties or training.”

The NHRC HTT protocol requires the warfighter to perform a 2-hour continuous treadmill walk in a thermal environmental chamber located at the laboratory, which is set at 104 degrees Fahrenheit and 40 percent humidity.

“This thermal environment was constructed to be a compensable environment in that if the participant has a typical thermoregulatory capacity, then that person will be able to compensate for the body heat buildup resulting from the exercise and environment by producing and
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Tech Representatives Tour NHRC's CAREN and Climatic Chamber

By Shawn Richeson, NHRC PAO

As part of the Navy Medicine Workshop on Modeling and Simulation sponsored by the Bureau of Medicine and Surgery, February 16-17, at the Miramar Officers Club, attendees visited the Navy Health Research Center (NHRC) Warfighter Performance Laboratory. The group was specifically interested in the lab's capabilities in modeling and simulation technology. Military and civilian attendees represented the Navy Medicine Manpower Personnel Training and Education Command, Naval Medical Center San Diego (NMCS), Naval Air Warfare Center and other technology focused groups.

Lt. Jamie Bartlett, NHRC operations officer, demonstrated the capabilities and expansion of the Computer Assisted Rehabilitation Environment (CAREN). This included NHRC's unique operational settings into the immersive environment and the progress on integration of a weapons system. Further CAREN demonstrations addressed the rehabilitation-based research protocols. This included the boat driving scene that will be used with mTBI patients from NMCS Vestibular Rehabilitation.

CAREN is a biomechanics and exercise physiology system that includes a motion platform that can pitch, yaw and roll by 25 degrees. On the platform is an integrated split-belt (side by side) treadmill and instrumented force plates to measure the pressures applied during walking, running or marching. In front of the motion platform is a nine-

foot tall screen that curves 180 degrees around the platform to view programmed simulations. CAREN is equipped with a full-motion capture sensor to record a subject's movements.

The Warfighter Performance Lab also demonstrated the newly installed climatic chamber. Attendees were able to walk into the new chamber while set above 104 degrees Fahrenheit with accompanying humidity changes. Jay Heaney, NHRC environmental physiologist, discussed the current Heat Tolerance Testing protocols adapted by NHRC to screen warfighters after a heat illness (see story on page 4). Fur-

ther demonstrations showed the integration of a flat-screen visual display to be used for cognitive testing and firearms training within the chamber.

In the NHRC Warfighter Performance Lab, active duty and civilian scientists collaborate with premier academic and military research institutions in studies concerning resiliency and performance of the warfighter. The primary focus areas include physical and cognitive operational research environments, operational fitness, environmental physiology, stress physiology, cognitive neuroscience, musculoskeletal biomechanics and epidemiology.



The Naval Health Research Center Computer Assisted Rehabilitation Environment (CAREN) in operation.

Heat Tolerance Test Determines Return to Duty and Training Status

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evaporating sweat referred to as evaporative cooling," said Heaney.

The NHRC Heat Tolerance Test protocol includes a treadmill workload of 3.3 mph at a grade of 4 percent. Passing the HTT requires completing the treadmill walk without exceeding a core temperature of 38.6 degrees Celsius and without exceeding a heart rate of 160 beats per minute.

"NHRC has contributed to returning 34 warfighters to Fit for Full Duty status. For example, within the BUD/S training environment, use of the NHRC HTT results in 20 trainees being allowed to resume their training," said Heaney. "NHRC takes great pride in contributing to the process that resulted in 10 of those trainees becoming SEALs."

NHRC, located in San Diego,

Calif., works closely with operational units by conducting medical modeling and simulation analysis; monitoring the effects of combat exposure on psychological health; managing career-span deployment health and readiness programs; improving warfighter performance; and assisting in the implementation of military-specific HIV prevention programs around the world.

Bone Marrow Donation Drive for Naval Academy Graduate

*By Mass Communication Specialist
2nd Class Alexia Riveracorrea*

U.S. Naval Academy midshipmen and members of the Midshipmen Action Group (MAG) conducted a bone marrow donation drive in Smoke Hall at the Naval Academy February 18 in search of a bone marrow match for Ensign Colin Smith, Class of 2009.

Almost 1,400 midshipmen registered to donate by giving a sample of saliva, which will then be analyzed for a possible match.

Smith played Navy club lacrosse at the academy and also at the Naval Academy Preparatory School in Newport, R.I. In October 2010, while attending flight school in Corpus Christi, Texas, he was diagnosed with acute lymphocytic leukemia and is now undergoing chemotherapy at Walter Reed Army Medical Center.

"Our goal is to help Colin Smith," said MAG vice president Midshipman 1st Class Chris Memminger. "The idea behind it is to screen as many people as possible. Each year, there are 30,000 individuals who die because they were not able to get a bone marrow donor."

MAG has spearheaded multiple bone marrow donation drives in support of the C.W. Bill Young Department of Defense Donor Center, an organization dedicated to recruiting donors among military members and their families and advancing donor matching technology.

"MAG has been gathering volunteers from the 20th, 1st and 9th company," said oceanography professor Lt. Cmdr. John Woods, who assisted the midshipmen with the drive. "They've got close to 200 volunteers for multiple trainings, but mainly to learn how to administer the test."

The process of donating consists of a tissue sample, taken by swabbing the inside of the cheek. The sample is sent to the donor center to test for a possible match.



Bone marrow donation drive conducted at the U.S. Naval Academy. Photo by Mass Communication Specialist 1st Class Chad Runge.

The tissue information is coded and stored in the Defense Department and National Marrow Donor Program registries.

If a person is identified as a match and agrees to the process, they must take medication a week prior to the donation. The medication stimulates the release of bone marrow into the donor's blood stream. At the end of the week, the bone marrow is extracted through a process much like a blood donation. The donated blood is placed in a cell separator, a machine designed to separate the bone marrow cells from the donor's blood. Once the marrow cells are collected, the blood is pumped back into the donor.

The donation process is not complicated, but finding the exact match is, Memminger explained.

"It is almost like a puzzle to find the right donor," said Memminger. "If you don't have the best possible match, it could be too dangerous for the person who is getting the transplant. So they go through a lot of tests."

Although it is tough and rare to find a specific match, Memminger encouraged people to donate.

"By donating we are giving Ensign Smith a chance. We are giving him the opportunity to fulfill his naval career and have a life again," said Memminger. "The more people we can get on the national registry, the more likely that somebody will be a match. The more people we have screened, the more likely we might find a match for Ensign Smith."

Smith's mother Heidi Smith was present at the drive donation and expressed appreciation for what the Navy was doing for her son.

"We are very happy that the Navy and the academy have stood behind Colin. They have supported us," she said. "It is wonderful what everyone is doing for him, and if he doesn't benefit, someone will, because the registry is going to be national."

The C.W. Bill Young DoD Marrow Donor Center is one of 79 donor centers in the U.S. working with the National Marrow Donor Registry. The center was established to recruit volunteer marrow donors from active duty military, their immediate family members, civil service employees, Coast Guard, National Guard and Reservists.

The Bridge Between a DoD Bone Marrow Donor Drive and The National Registry is the Naval Medical Research Center

Following DoD donor drives like the one at the Naval Academy (see story on page 6), donor consent forms and oral swabs with cell samples are sent to the C. W. Bill Young DoD Marrow Donor Program Donor Center and Laboratory, which is part of the Naval Medical Research Center (NMRC).

"The consent forms and swabs are sent to our lab in Rockville, Md.," said Dr. Robert Hartzman, director of the NMRC Bone Marrow Research Directorate and manager of the C.W. Bill Young DoD Marrow Donor Program. "Each donor is given an identification number that is entered in the national registry. The name and other identifying information is retained by the DoD program. Great care is taken to assure confidentiality of every potential DoD donor."

The next step at the lab is genetic testing using the cells from the oral swabs to match potential donors with patients.

"Each swab is treated to isolate pure DNA from the chromosomes," said Hartzman. "The HLA (human leukocyte antigen) are the critical genes from the chromosomes that must be matched between potential donor and patient. The types for each of the HLA genes are then tested in our laboratory."

Hartzman went on to explain the process. There are four critical HLA genes, HLA-A, HLA-B, HLA-C and

HLA-DR. Each person has two copies of each of these four genes, one from each parent, and there are 1,000 to 2,000 varieties (called alleles) of each of the four genes. There are an enormous number of possible combinations of the eight genes for each person, and this combination of HLA types is related to each person's heritage. Since Americans are from all parts of the world, the likelihood of a perfect match between any two individuals who are not related is small. A few groups of individuals have very common types and may be found in one of a thousand people in the U.S.; some have rare types and may only be found in one person in the U.S. Almost everyone falls in between these extremes. In general, it is more difficult to find a perfect match for American minority patients.

If a patient does not have an HLA matched sibling, his or her physician sends a request for a donor through the National Marrow Donor Program. If the donor who matches the patient is registered in the C. W. Bill Young DoD Program, a program representative contacts the potential donor.

"If the donor is available and agrees to proceed and their command approves, additional genetic matching is performed to assure a match," said Hartzman. "Additional medical evaluations are

Over 650,000 DoD volunteers have registered as potential marrow donors. Of these, over 3,500 have donated "marrow" for patients needing transplants to treat one of over 80 potentially fatal diseases. These volunteers are registered in the National Marrow Donor Program (NMDP), a program started by Navy support in 1986 as a unified national program. There are over 9,000,000 volunteers on the national registry and over 42,000 transplants have been performed through the NMDP.

performed to assure the donor's good health and a transplant date is selected. The C. W. Bill Young Donor Center works closely with both the donor and their command. The donor's cells are transported to the patient's hospital for transplantation. The patient and donor can choose to meet each other one year after the transplant."

The efficiency and effectiveness of these transplants have been greatly enhanced by the joint Navy-NMDP program, resulting in improvements in transplant matching and data search and dramatically improving the ability of a physician to rapidly identify a matched donor for a patient.

NMRC in the news

NMR&D News Malaria Vaccine Article in "Armed with Science" Blog



A recent NMR&D News article, "Engineering Next Generation DNA Vaccines for Novel Pathogens," was featured in "Armed with Science," the Department of Defense's official science and technology blog, which features content written by scientists, engineers and subject matter experts. Since launching in January 2010, the blog has been viewed over 3 million times — a tribute to the diverse contributions from DoD military and civilian personnel and from partners throughout the Federal Government, academia and industry. [View the blog post.](#)

Who We Are - U.S. Naval Medical Research Unit No. 2

Busy February for U.S. Naval Medical Research Unit No. 2 Pacific

Provided by NAMRU-2 Pacific Public Affairs

Lt. Dustin Harrison, microbiologist from the U.S. Naval Medical Research Unit No. 2 Pacific ([NAMRU-2 Pacific](#)), recently participated in Operation Cobra Gold 2011, a multi-national joint military exercise held annually in Thailand. While in Thailand, Harrison worked with scientists from the Armed Forces Research Institute for Medical Sciences (AFRIMS), Bangkok, and the Naval Health Research Center (NHRC), San Diego, in conducting infectious disease surveillance in support of U.S. forces deployed for Cobra Gold. This year's participants included military personnel from the U.S., Thailand, Singapore, Japan, Republic of Korea, and Indonesia.

The team's infectious disease surveillance efforts focused on febrile respiratory illness and gastrointestinal diseases that have operational abortive

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Visiting with members of the NAMRU-2 research team in Cambodia, front row, from left: Capt. William Rogers, NAMRU-2 science director; Capt. Gail Hathaway, NAMRU-2 commanding officer; Rear Adm. Michael Mittleman, Pacific Command surgeon. Second row, third from left: Capt. Bruce Gillingham, Pacific Fleet surgeon. Photo by Lt. Dustin Harrison, NAMRU-2 Pacific.

Greetings from the NMRC Ombudsman!

Most of us are aware of the recent events of demonstrations and instability in Egypt. Let us not forget the effect this had on many of our Navy families who are currently stationed at NAMRU-3. Thankfully, most NAMRU-3 staff and all the families were evacuated quickly and safely and returned to the United States. Unfortunately, these families have been put into a difficult situation of finding places to live for an indefinite period of time, getting together basic necessities, and making sure their children's education is taken care of. I ask that if you know of any families that are having specific difficulties adjusting or finding resources, please make sure to refer them to me. The Command staff here at NMRC is equipped and prepared to help these families with whatever they might need.

I also want to thank Mrs. Aimee House, the NAMRU-3 Ombudsman, for all her hard work in staying in touch with all the families during this difficult time.

Military Saves: Are you financially fit? The Department of Defense is kicking off a national campaign to encourage military families to become fiscally responsible and begin building long-term financial wealth. Go to <http://www.militarysaves.org> to pledge today to Build Wealth, Not Debt!

Are your kids getting the proper nutrition? Most people know that good nutrition is important to a healthy mind and body, but what is good nutrition for an infant, toddler or adolescent? That's why Navy Fitness has put together a free nutrition guide that will give you the information you need to keep your child at his/her best at any age. Check out http://www.navyfitness.org/nutrition/nutrition_from_preconception_to_the_teen_years/ for your download.

Tax Time: Don't forget to take advantage of free federal and state filing software from H&R Block and MilitaryOneSource. You must go through <http://www.militaryonesource.com/MOS/FindInformation/Category/TaxFilingServices.aspx> to set up your free account.

If you need help finding all the great resources the military has to offer or just need someone to talk to, please contact me at angela.prouty@med.navy.mil or 217-722-4981.

Angela Prouty
Ombudsman, NMRC

Who We Are - U.S. Naval Medical Research Unit No. 2**Busy February for U.S. Naval Medical Research Unit No. 2 Pacific**

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potential. These kinds of studies help guide force health protection measures by providing information on disease risks that may affect future exercises in the region and also help in guiding vaccine development.

"The month-long exercise yielded surprisingly few samples," said Harrison, "a true testament to the

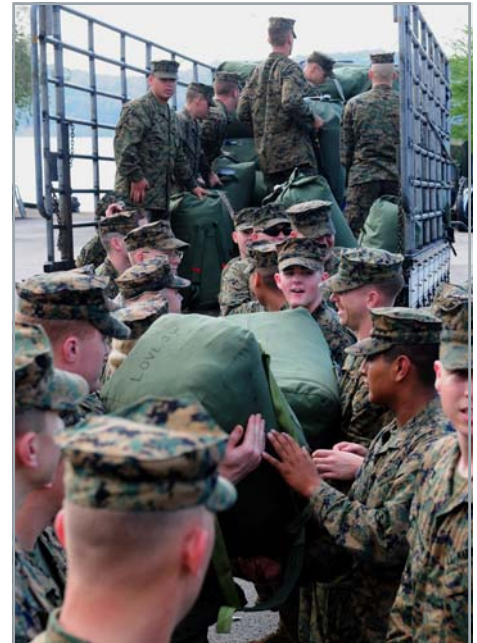
education, training and delivery of health care services provided by our Navy Medicine team."

Harrison also pointed out that U.S. Pacific Command Surgeon Rear Adm. Michael Mittelman visited NAMRU-2 Pacific in February. Mittelman, along with U.S. Pacific Fleet Surgeon Capt. Bruce Gillingham and NAMRU-2 Pacific Commanding Officer Capt. Gail Hathaway, had just completed an official visit in the Socialist Republic of Vietnam, then went on to visit NAMRU-2 Pacific's study sites and detachments in Southeast Asia.

Harrison caught up with Mittelman's party in Lao People's Democratic Republic (PDR) when the admiral met with U.S. and Lao PDR government officials to discuss ongoing research collaborations.

"NAMRU-2 Pacific, the National Center for Laboratory and Epidemiology of the Laos Ministry of Health, the World Health Organization, and the U.S. Centers for Disease Control and Prevention are currently conducting influenza-like illness surveillance using the EWORS (Electronic Warning Outbreak Response Surveillance) platform developed by NAMRU-2. Future respiratory and enteric disease surveillance projects are also being planned," said Harrison.

Mittelman also visited NAMRU-2 Pacific's detachment in Phnom Penh, Cambodia. He met with NAMRU-2 Phnom Penh Director Capt. William Rogers, who briefed the Admiral on current research projects being



Marines assigned to the 31st Marine Expeditionary Unit (31st MEU) load sea bags into a truck during Exercise Cobra Gold 2011. The 31st MEU and the Essex Amphibious Ready Group participated in Exercise Cobra Gold 2011, a U.S. and Thailand sponsored multi-national exercise designed to improve interoperability among participating nations. Photo by Mass Communication Specialist 2nd Class Casey H. Kyhl.

conducted within the country.

"Visits such as these assist Combatant Commanders in developing Force Health Protection strategy and policy, as well as focusing our own research to meet the needs of tomorrow's Navy while promoting global public health," explained Harrison.

About Cobra Gold

Military personnel representing Thailand, Singapore, Japan, Indonesia, Republic of Korea and the United States participated in Exercise Cobra Gold 2011 February 7-18.

Exercise Cobra Gold is a regularly scheduled joint and coalition multinational exercise hosted annually by the Kingdom of Thailand. Cobra Gold 2011 is the latest in a continuing series of exercises designed to promote regional peace and security. Cobra Gold 2011 is rooted in partnerships and recognizes the need to develop multinational solutions to common challenges. This year marks the 30th anniversary of this regionally significant, regularly scheduled training exercise, which consisted of a staff exercise, humanitarian civic assistance projects and field training exercise events.

Cobra Gold 2011 is building on progress made during past exercises.

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